

Irish Communications Market

Quarterly Key Data Report

Data as of Q2 2009

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Corrigendum for the June 2009, Quarterly Key Data Report, ComReg Doc 09/50

- Mobile broadband subscriptions have been revised downwards by 6,692 from 354,674 to 347,982 for the period Q1 2009. Total broadband subscriptions (inc. mobile broadband) for the period Q1'09 were 1,265,474. Net additions in Q1'09 totalled 65,332.
- In the Irish Communications Market: Key Data Report Q1 2009 handset revenues were excluded from mobile retail revenues analysis. Mobile retail revenues have been revised in this report to incorporate gross handset revenues for the period Q1 2009.
- In the Irish Communications Market: Key Data Report Q1 2009 table 1.3.2 total voice traffic incorrectly reported 2,449,715,221 mobile minutes. This should have been 2,499,715,221 minutes.

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The information and statistics contained within this document are derived from a variety of sources, but are mostly reliant on data obtained from authorised operators.

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Summary

In the second quarter of 2009 data indicates that revenues across all sectors (fixed, mobile and broadcasting) declined as the economic recession continued to have an impact on consumer and business telecommunication usage. Seasonality issues may also have some impact on the data presented below. Presented below is a short summary of this report.

Irish Quarterly Communications Market Data Q2 2009			
			Quarterly
	Q2′09	Q1′09	Change
Total Market Revenues	€1,012,274,907	€ 1,052,084,059	-3.8%
Fixed Line Revenues	€509,870,105	€528,527,869	-3.5%
Mobile Revenues	€455,627,240	€476,079,234	-4.3%
Broadcasting Revenues	€46,777,900	€47,476,956	-1.5%
Total Voice Traffic	4,624,414,870	4,680,683,417	-1.2%
Fixed Voice Traffic	2,087,289,905	2,180,968,196	-4.3%
Mobile Voice Traffic	2,537,124,965	2,499,715,221	+1.5%
Internet Subscriptions	1,463,290	1,465,907	-0.2%
Broadband Subscriptions	1,305,035	1,265,474	+3.1%
Narrowband Subscriptions	158,255	200,433	-21.0%
Mobile Subscriptions (inc. HSDPA)	5,180,281	5,275,985	-1.8%

- Overall market revenues continued to decline this quarter by 3.8% to just over €1.01 billion. Fixed revenues retain the dominant share at 50.4%, followed by mobile (45%) and broadcasting (4.6%).
- Total voice traffic minutes decreased by 1.2% this quarter to just above 4.6 billion minutes, due to a decline in fixed voice traffic. Mobile minutes form the majority of voice minutes at 55%, with fixed minutes representing the remaining 45%. Mobile voice minutes increased by 1.5% this quarter despite the overall fall in mobile revenues this quarter.
- The biggest fixed line operators by revenue market share are Eircom (67.8%), BT (14.1%), UPC (2.8%), Access (2.5%), Verizon (2.3%), Perlico (2.1%) and Colt Telecom (2.0%). This is based on both retail and wholesale fixed revenues.
- This quarter, total internet subscriptions fell slightly to 1,463,290. This represents a negative growth rate of -0.2% since last quarter but a positive growth rate of 8.9% on Q2 2008.

- Reductions in narrowband internet subscriptions accelerated this quarter declining by 21.0% and 45.3% since Q2 2008 to 158,255.
- Broadband subscriptions (fixed and mobile) continued to increase, reaching 1,305,035 this quarter. This represents an increase of 3.1% since the last quarter. Broadband growth has slowed in the last two quarters from 6.7% in Q4'08 to 5.4% and 3.1% in Q1 09 and Q2'09. Broadband per capita penetration reached 29.5% this quarter including mobile broadband.
- Mobile per capita penetration (inc. HSDPA) was 117.1% in Q2 2009. Excluding mobile broadband subscriptions, the penetration rate was 108.8%.
- Mobile revenues decreased by over 4% this quarter and have decreased by 11.6% since Q2 2008.
- Mobile payments are discussed in section 6 Emerging Trends, of this report.

Notes to data:

- Aggregated SB-WLR Performance Statistics, as supplied by Eircom, are published in accordance with ComReg Decision Notice (07/61) Section 6.6 (vii) in the appendix.
- In this report Irish population estimates from the Central Statistics Office of 4,422,100 for April 2008 are used.
- A number of external sources are used for international comparisons. These include the Yankee Group, CSO, Informa Telecoms and Media, Teligen, and the European Commission.
- In most cases data has been rounded to one decimal place in this report.
- Q1 2009 submissions for Bitbuzz, Broadworks, Clearwire, Greencom and Icarus were used in this report.
- Further explanations and descriptions of data supplied in this report can be found in the accompanying explanatory memorandum 09/71a.
- Extracts of data used in this report can be downloaded at <u>www.comstat.ie</u>
- Data previously published may have been amended since publication. Any such amendments are noted in the corrigenda to this report.

1 Overall Market Data

Data presented in this report is based on questionnaires completed by authorised operators for the period from 1st April 2009 to 30th June 2009. The report is based on submissions from 59 active operators¹.

1.1 Number of Authorisations

Figure 1.1.1 - Total Number of Authorisations

Total Authorisations	September 2009
No. of fixed and wireless authorisations	358
No. of mobile telephony authorisations	7
No. of broadcasting authorisations (incl. Cable TV, MMDS, Deflectors)	85
Total Number	450

Before providing networks or services to third parties, operators are required to submit a notification to ComReg which is added to a central register of authorised operators. At the date of publication there were 450 authorised undertakings in Ireland. It should be noted that the list above refers to the number of general authorisations granted by ComReg under the European Framework for Authorisations, and does not necessarily reflect the total number of commercially active organisations or entities currently operating in the market. The total includes a number of undertakings who are authorised to use licence-exempt spectrum for the provision of services.

¹ Q1 2009 submissions for Bitbuzz, Broadworks, Clearwire, Greencom and Icarus were used in this report.

1.2 Overall Electronic Communications Revenues²

Data presented in Figure 1.2.1 examines the proportion of industry revenue attributable to the provision of fixed line, mobile and cable broadcasting services. It should be noted that mobile revenues have been revised since last quarter's publication (09/50).





Overall electronic communications network and service revenues at the end of June 2009 were just over \in 1.01bn for the quarter. Annualised revenues on this basis would be almost \in 4.05bn for 2009. Industry revenues decreased by 3.8% this quarter and have fallen 11.1% since Q2 2008. All three sectors of the communications market experienced a decline in revenues this quarter. Fixed revenues decreased by 3.5%, while mobile and broadcasting revenues declined by 4.3% and 1.5% respectively. It should be noted that broadcasting revenues are understated in this report, as Sky Ireland's satellite TV revenues are not included in the analysis.

While in absolute terms all categories experienced a decline in revenues this quarter, both the fixed line and broadcasting sector increased their revenue share due to a larger fall in mobile revenues. Fixed line revenues accounted for 50.4% of total revenues which was a 0.2 percentage point increase from the previous quarter. Broadcasting revenue share increased by 0.1 percentage points to 4.6% but the mobile industry's share of total revenues decreased by 0.3 percentage points from 45.3% to 45%. This fall can partly be explained by amendments made to mobile revenue definitions in Q2'09.

² For further detail on terms and definitions see ComReg Document Number 09/71a Explanatory Memorandum to the Quarterly Key Data Report.



Figure 1.3.1 - Share of Total Voice Call Volumes (Minutes)³

1.3 Overall Call Volumes



		Quarterly	Year-on-Year
	Q2'09 Mins	Growth	Growth
		Q1′09 – Q2′09	Q2′08 – Q2′09
Fixed voice minutes	2,087,289,905	-4.3%	-10.4%
Mobile voice minutes	2,537,124,965	+1.5%	-11.0%
Total voice minutes	4,624,414,870	-1.2%	-10.7%

³ Fixed advanced minutes include premium rate services minutes, freephone minutes, VoB minutes, payphone minutes, operator services minutes, national and international virtual private network minutes. Mobile advanced minutes include premium rate services minutes and other mobile minutes such as voicemail, DQ, call completion minutes etc.

1.4 Pricing Overview

This section examines Ireland's current and previous rankings based on a comparison of prices for specific consumer baskets in a number of EU countries. Data on PSTN⁴ and mobile baskets is provided to ComReg by Teligen who use an OECD-approved methodology to compare fixed (PSTN) and mobile tariffs.

This format follows a basic three-step process consisting of:

- the construction of one or more baskets of telephone services (including variable (e.g. calls) and fixed (e.g. rental) charges);
- the pricing of those baskets; and
- the conversion of the individual currencies to standard units (i.e. US Dollars or Euros and Purchasing Power Parities (PPPs)).

Countries are then ranked based on PPPs, with the least expensive country ranked 1st. The charts presented in this section provide an overview of Ireland's ranking relative to 19 other EU member states for which data is available since the revision of the OECD baskets in February 2006. Individual pricing charts for each basket for May 2009 are analysed under the heading "Pricing Data" in the specific mobile and fixed sections of this document. Ireland's position is ranked in relation to other EU member states.

For further information on Teligen's methodology please see the accompanying memorandum ComReg 09/71a.

⁴ PSTN refers to a public switched telephone network or copper telephony network, on which calls can be made. A PSTN line is more commonly known as a copper telephone line.

1.4.1 PSTN Baskets

Figure 1.4.1.1 shows the movement in Ireland's position relative to 18 other EU countries in all PSTN baskets since May 2007, where the least expensive country based on the methodology is ranked 1st and the most expensive is ranked 19th. Ireland continues to remain less expensive than the average basket cost across three of the PSTN services analysed (national business, international residential and international business baskets). For both the national business basket and the international residential basket, Ireland's position has improved by one position this quarter. Ireland's position in the international business basket has remained the same this quarter, while its position in the national residential call basket has remained the same as Q1 2009, in 16th position.



Figure 1.4.1.1 – Ireland's Position in the Various PSTN Baskets

1.4.2 Mobile Baskets

Figure 1.4.2.1 shows the movement in Ireland's position in all the mobile baskets since May 2007 relative to 18 other EU countries, where the least expensive country is ranked 1st and the most expensive country is ranked 19th. Ireland's position in the low user post-paid basket remained 8th in May 2009, ranking Ireland three places better when compared to May 2007. As of May 2009 Ireland ranks in 10th position for both the medium and high user post-paid baskets. In the pre-paid basket Ireland is also positioned in 10th place. As of May 2009 Ireland's rankings remain unchanged in all the mobile baskets when compared to February 2009.



Figure 1.4.2.1 – Ireland's Position in the Various Mobile Baskets

2 **Fixed Market Data**

2.1 Total Fixed Line Revenues

Figure 2.1.1 shows the profile of fixed line wholesale and retail revenues in Q2 2009. Total fixed line revenues at the end of June 2009 were almost €510 million. This was a 3.5% decrease on Q1 2009 revenues, which were just under €529 million. Revenues from interconnection and retail broadband increased by 4% and 3% respectively, while revenues from retail narrowband and leased lines, managed data and other advanced data services experienced a significant decline this quarter.

The market share of leased lines, managed data and other advanced data services fell by one and a half percentage points and retail narrowband's market share dropped by less than half of a percentage point. The market shares of retail broadband and interconnection both increased by approximately one percentage point.



Figure 2.1.1 – Profile of Fixed Line Revenues

2.1.1 Authorised Operators' Share of Overall Fixed Line Revenues

Figure 2.1.1.1, below, shows the market shares of the incumbent and other authorised operators (OAOs) in each of the fixed line service categories set out, above, in figure 2.1.1. Market shares are grouped within a number of revenue categories to link related services and are based on both retail and wholesale revenues; this classification does not reflect the specific markets identified in ComReg's Market Review process.

This quarter Eircom made gains relative to OAOs in its market share of retail broadband and retail narrowband but lost market share in interconnect, leased line, managed services and other revenues.

Since last quarter, Eircom's interconnect market share has decreased from 66.9% to 64.2%, though its retail narrowband market share has increased marginally to 74.1%. Its share of "Leased line, managed and other" revenues has fallen from 65.8% to 61.1% while Eircom's retail broadband market share has increased to 54.6%.



Figure 2.1.1.1 – Operator Share of Fixed Line Revenues⁵

⁵ Eircom's retail broadband share includes DSL, FWA and Satellite revenues

Eircom's overall share of fixed line market revenue has decreased this quarter by just over one percentage point. When compared to its market share two years ago, this is a 0.2 percentage point decrease. Figure 2.1.1.2, below, shows Eircom's market share on a quarterly basis from Q2 2007 to Q2 2009.



Figure 2.1.1.2 – Eircom's Market Share

Figure 2.1.1.3 below outlines revenue market shares of the total fixed market in Q1 and Q2 2009 in terms of revenue shares (of interconnect, retail narrowband, retail broadband and leased line, managed and other data) held by the incumbent fixed line operator, OAOs with a minimum 2% market share, and all other OAOs. When making comparisons, it is important to note that while the market shares presented below are based on shares across all fixed wholesale and retail revenue streams, some operators may not offer products and services across all segments of the market and/or may not provide a wholesale service to other operators. In Q2 2009, after Eircom, the largest revenue-earning operator in the market with 67.8% market share, ComReg estimates that the next six largest operators (BT Ireland, UPC, Access Telecom, Verizon, Perlico and Colt) contribute a further 25.9% of industry revenue. These charts are presented as an additional analysis of the fixed market and should not be interpreted as a definitive statement of retail revenue market shares.



Figure 2.1.1.3 – Revenue Market Share of Fixed Line Operators Revenue Market Share of Fixed Line Operators, Q2'09

Source: Quarterly Key Data Questionnaire





2.2 Fixed Line Access Paths

2.2.1 Access Paths

Figure 2.2.1.1 presents the total number of narrowband copper fixed access paths (PSTN and ISDN) broken out by direct and indirect access⁶. These paths are usually used for voice services and dial up internet access. There were just under 2 million direct and indirect PSTN and ISDN access paths in the Irish market in Q2 2009. This represents a decline of 5.2% since Q2 2008 and 2.1% since Q1 2009.

In Q2 2009, indirect access accounted for 23.4% of all access paths in the fixed market.⁷ This represents a continued upward trend over the last year. While this chart shows the number of narrowband only access paths in Ireland, voice and data can also be supplied by other means such as broadband. Details on the broadband market in Ireland can be found in chapter 3 of this report.



Figure 2.2.1.1 – Direct & Indirect Narrowband Fixed Access Paths

Direct & Indirect Narrowband Access Paths

⁶ Indirect access paths relate to telephone lines provided to customers by means of carrier pre-select only or wholesale line rental. Carrier preselect allows the user to receive all or a portion of calls from one provider and line rental from another provider (usually Eircom). Wholesale line rental (also known as single billing) allows the user to receive every aspect of telephone service, including all calls and line rental from one single supplier.

⁷ Access paths are not synonymous with access lines as for example in the case of ISDN paths, there may be more than 1 path provided via a single ISDN line.

2.2.2 Indirect Access Paths

Figure 2.2.2.1 illustrates the overall number of PSTN and ISDN paths provided by means of either Carrier Pre-Selection (CPS) only or Wholesale Line Rental (WLR). In Q2 2009, there were 465,440 indirect access paths in Ireland. The number of indirect access paths fell by 0.9% in Q2 2009. However in the year to Q2 2009 the number of indirect access paths has grown slightly by 0.5%.

This quarter there was a slight drop off in WLR after continuous quarterly growth over the last three years. However, figure 2.2.2.1 shows OAOs continue to migrate their customer base to single-bill services, i.e. WLR rather than CPS (i.e. calls only) services to customers. WLR managed by OAOs now accounts for almost 83% of indirect access paths compared to 71% in Q1 2007. This is in contrast to CPS which has declined by over 10 percentage points in the same period.



Figure 2.2.2.1 – Narrowband Indirect Access Paths

2.3 Fixed Voice Call Volumes

Fixed voice call traffic in Q2 2009 was 2.09 billion minutes, which was a 4.3% decrease since Q1 2009 and a fall of 10.4% since Q2 2008. Domestic, international outgoing, and other/advanced minutes have fallen this quarter, while minutes to mobiles have increased. Voice over broadband (VoB) minutes now account for approximately 1.99% of this total. ComReg data shows almost 42 million VoB minutes for Q2 2009, an almost four-fold increase on over 11 million of VoB minutes in Q2 2008. VoB subscriptions and traffic volumes suggest that VoB is continuing to grow in popularity. VoB minutes in this report represent managed VoB and so do not include unmanaged VoB by providers such as Skype.

Minutes to mobile increased by 6.1% this quarter and are up by almost 4% since Q2 2008. Domestic minutes declined by approximately 6.1% in Q2 2009 and since the same period last year are down by 12%. International outgoing minutes fell by 4.9% this quarter and have declined by 15% since Q2 2008. Other/advanced minutes (which include VoB minutes) have fallen by 8.1% this quarter and by 13% since Q2 2008. Changes in the volumes and profile of fixed line traffic will continue to be monitored by ComReg for evidence of changes in fixed line usage, such as increased fixed-mobile substitution. Figure 2.3.1 illustrates trends in fixed voice call minutes since Q2 2007.



Figure 2.3.1 – Fixed Voice Call Volume (Minutes)⁸

⁸ Domestic Calls include local & national calls. Advanced service and other minutes include minutes to premium rate numbers, freephone numbers, callsave, operator services, VoB minutes, VPN minutes, payphones and other services.

2.4 PSTN Pricing Data

ComReg uses independently-collated Teligen data using an OECD-approved methodology to examine the relative costs of a number of specific baskets of national and international telecoms services for both residential and business users. The data presented includes all EU countries for which data is available⁹. Using this methodology, data is presented using USD (\$) converted to Purchasing Power Parities (PPPs). The latter provides an indication of the cost of telecoms services in countries analysed in relation to the cost of all other products and services, and takes account of exchange rate differences.

2.4.1 OECD National Residential Basket

Figure 2.4.1.1 illustrates Ireland's ranking, alongside another 18 EU countries, in the national residential basket, based on a basket of calls and fixed costs for usage over a 12 month period. This chart is based on a comparison of the cheapest incumbent package available for a specific customer usage profile. In many cases this will be a bundled service which will include both line rental and a "bundle" of call minutes for a fixed monthly charge. It should therefore be noted that the "fixed" element in this basket is not an indication of the cost of basic line rental. In May 2009 Ireland ranked in 16th position, behind the average of the EU19 countries in terms of the most competitive pricing for this basket. Ireland's position for the basket remains the same since February 2009.



Figure 2.4.1.1 - OECD National Residential Basket – May 2009¹⁰

⁹ This will be determined by whether the EU country is also an OECD member.

¹⁰ Residential tariffs include VAT. VAT rates vary between member states.

2.4.2 OECD National Business Basket

As with the residential basket, the chart below is based on a comparison of the cheapest incumbent business package available for a set number of voice calls over a 12 month period, and also includes a fixed charge for access as part of a bundled service. It should be noted that the "fixed" element in this basket is not an indication of the cost of basic line rental. This quarter, Ireland is approximately 18% cheaper than the EU19 average and has moved up one position to 5th since Q1 2009.



Figure 2.4.2.1 - OECD National Business Basket – May 2009

2.4.3 OECD International Residential Basket

Figure 2.4.3.1 ranks 19 EU countries based on the cost of residential three-minute peak international calls and five-minute off-peak international calls from one country to all other countries in the basket. The average cost for Ireland is approximately 50% cheaper than the EU19 average, and its position has improved by one place since the last quarter to 2nd.





¹¹ Residential tariffs include VAT. VAT rates vary between member states.

2.4.4 OECD International Business Basket

As with the previous chart, figure 2.4.4.1 ranks 19 EU countries (including Ireland) based on the cost of business three-minute peak international calls and five-minute off-peak international calls from one country to all other countries in the basket. The average cost for Ireland is approximately 50% cheaper than the average of the EU19 countries and Ireland has maintained its ranking of third place since February 2008.



Figure 2.4.4.1- OECD International Business Basket – May 2009

3 Internet and Broadband

3.1 Total Internet Subscriptions

At the end of June 2009, there were just over 1.46 million active internet subscriptions in Ireland.¹² This is a 0.2% decline on the previous quarter and an 8.9% increase on June 2008. Overall, narrowband subscriptions have continued to decline since 2004. Flat-rate narrowband subscriptions fell by 13.1% and metered narrowband subscriptions decreased by 22.3% on the previous quarter. Total broadband subscriptions continued to grow in the quarter, but quarterly growth has halved when compared to the increase between Q4 2008 and Q1 2009. Growth is up by 3.1% in the quarter and 23.7% since Q2 2008. The increased decline in narrowband subscriptions coupled with the increase in broadband subscriptions suggests a possible acceleration in migrations towards broadband. Growth in broadband subscriptions this quarter was mainly driven by net increases in mobile broadband and cable. If mobile broadband (HSDPA) subscriptions are excluded, growth for Q2 2009 was 1.9% and since Q2 2008, 12.3%.

In absolute terms, mobile broadband (via HSDPA, HSPA and 3G) showed the largest net additions with over 22,000 new additions this quarter; a 6.4% increase. Cable broadband additions showed the most significant growth this quarter, up 10%, an increase of more than 11,000 in absolute terms. In the twelve months to June 2009 mobile broadband subscriptions increased by 66%, while cable broadband subscriptions are up by 36% for the same period. Figure 3.1.1 shows the total number of narrowband and broadband subscriptions to internet services in Ireland.

Subscription Type	Q2'09 Subs	Quarterly Growth Q1'09- Q2'09	Year-on-Year Growth Q2'08- Q2'09
Metered Narrowband	134,217	-22.3%	-45.9%
Flat Rate Narrowband	24,038	-13.1%	-41.6%
DSL Broadband ¹³	687,870	-1.2%	+12.5%
Other Broadband ¹⁴	617,165	+5.3%	+39.2%
Total Internet Subscriptions	1,463,290	-0.18%	+8.9%

Figure 3.1.1 – Total Number of Active Internet Subscriptions

¹² Total internet subscriptions have been revised for the period Q1'09 to 1,465,907.

¹³ DSL refers to a digital subscriber line, the means by which broadband speeds (i.e. in excess of 144k downstream) are delivered over the copper telecoms network.

¹⁴ Other Broadband includes cable broadband, fixed wireless access, fibre, satellite and mobile broadband connections.

Figure 3.1.2 profiles internet subscriptions in Ireland using the classifications of subscription type outlined in figure 3.1.1. Broadband subscriptions account for 89.2% of all internet subscriptions. Figure 3.1.2 provides a profile for the periods Q2 2007 – Q2 2009. DSL subscriptions alone account for 47% of all internet subscriptions. DSL's share of total internet subscriptions has increased by 4 percentage points over the last two years while metered narrowband and flat-rate narrowband's combined share has fallen by 25.8 percentage points over the same period. Since mobile broadband subscriptions were included in Q2 2007, market share of the "Other Broadband" category has grown by 21.8 percentage points.



Figure 3.1.2 – Profile of Active Internet Subscriptions

Source: Quarterly Key Data Questionnaire

Figure 3.1.3 profiles only those internet subscriptions delivered over the copper telecoms network. It includes an analysis of metered or pay-as-you-go narrowband subscriptions, flat-rate narrowband subscriptions and DSL subscriptions. There were 846,125 active internet subscriptions over the copper telecoms network at the end of June 2009. This was a decline of 33,886 (-3.9%) in the total number of copper-based subscriptions since Q1 2009 due to falls in narrowband subscriptions.

DSL accounted for 81.3% of copper-based internet subscriptions in Q2 2009 compared to 77.2% in Q1 2009. Metered narrowband subscriptions accounted for 15.9% of internet subscriptions over copper compared to 19.6% in Q1 2009. Flat-rate narrowband internet subscriptions made up the remaining 2.8% of copper-based internet subscriptions compared to 3.1% in the previous quarter.





Source: Quarterly Key Data Questionnaire

3.2 Provision of DSL Access

Figure 3.2.1 examines the provision of DSL access. DSL broadband services are provided to consumers by operators using three alternative methods of access. DSL may be provided directly to the consumer by Eircom using direct access to its network; this accounted for 69.3% of all DSL subscriptions in June 2009. Retail DSL may also be provided by alternative operators (OAOs) who use either wholesale bitstream, which enables OAOs to resell another operator's DSL service, or by offering DSL-based broadband using local-loop unbundling (LLU).

At the end of June 2009, 27.3% of all DSL lines were provided by OAOs using wholesale bitstream, and the remaining 3.4% of DSL lines were provided to subscribers by OAOs using local-loop unbundling. At the end of June 2009 there were 23,630 local loops unbundled. Eircom's market share of retail DSL lines has grown by 2.1 percentage points over the last two years.



Figure 3.2.1 - Provision of DSL Access

Source: Quarterly Key Data Questionnaire

Figure 3.2.2 shows the number of unbundled lines classified by shared and full¹⁵ status. Between Q2 2007 and Q2 2009 the total number of LLU lines increased by 27%. In Q2 2009 total LLU lines grew by 1.6%, the slowest quarterly growth rate over the last year.

Fully unbundled lines accounted for 72.5% of total LLU lines in Q2 2009. The proportion of shared lines relative to the total number of LLU lines has continued to increase over the last two years, showing strongest growth in the last year. In Q2 2007, shared LLU lines accounted for only 5.9% of all LLU lines while in Q2 2009 they accounted for 27.5% of all LLU lines.





¹⁵ Full LLU and shared LLU are two ways a copper loop may be unbundled. While full LLU assigns the entire copper loop to the leasing operator, shared LLU enables other operators and the incumbent to share the same line. With shared access consumers can acquire voice and data services from an operator or alternatively data services alone while retaining the voice services of the incumbent.

3.3 Provision of Broadband Services

Figure 3.3.1 summarises the total number of broadband subscriptions at the end of the quarter by access technology.

High Speed Downlink / Uplink Packet Access (HSDPA/HSUPA) provides mobile broadband access to a large number of Irish consumers. In order to fully reflect the range of broadband services available to customers in Ireland, ComReg started to include this data in its overview of the market in the Q2 2007¹⁶ report.

At the end of June 2009, there were 1,305,035 broadband subscriptions in Ireland. This represents a growth rate of 3.1% in the number of subscriptions for this quarter. FWA subscriptions declined by 3% in Q2 2009. This is a 7.3% decrease since FWA subscriptions peaked in Q1 2008.

Broadband in the other category showed the highest growth of all platforms this quarter; but from a very low base. Growth for cable this quarter is the most noteworthy. In the last year, cable broadband subscriptions have grown by 35.9%.

Platform	Q2'09 Subs	Quarterly Growth Q1'09 – Q2'09	Year-on-Year Growth Q2'08 – Q2'09
DSL	687,870	+1.2%	+12.5%
Cable	124,309	+10.0%	+35.9%
FWA	112,946	-3.0%	-6.1%
Other ¹⁸	9,486	+11.8%	+2.7%
Sub-Total	934,611	+1.9%	+12.3%
Mobile Broadband	370,424	+6.4%	+66.6%
Total	1,305,035	+3.1%	+23.7%

Figure 3.3.1 – Broadband Subscriptions¹⁷ and Growth Rates by Platform

¹⁶ In Q2 2007 an estimate of 45,000 mobile broadband subscriptions was used.

¹⁷ ComReg notes that the data provided in this section relates to active subscriptions reported by operators. It takes into account multiple active subscriptions to broadband offerings by individual subscribers.

¹⁸ Other Broadband includes Satellite and Optical Fibre broadband subscriptions.

DSL remains the largest broadband access platform in terms of subscriptions, accounting for 52.7% of all broadband subscriptions, which is a slight decrease of DSL's share of broadband since Q1 2009 (53.7%). Other platforms account for the remaining 47.3% of connections.

Figure 3.3.2 illustrates the growth in total broadband subscriptions in the Irish market since Q2 2007. Mobile broadband subscriptions were included in figure 3.3.2 for the first time in Q2 2007. Therefore total subscriptions levels since Q2 2007 in figure 3.3.2 are now directly comparable.





Figure 3.3.3 shows the number of broadband net additions by platform for each quarter since Q2 2007. Although DSL remains the main means of broadband access to the internet, mobile broadband has been the largest contributor to new broadband growth in each quarter since Q1 2008. In total, there were 39,561 net additions to broadband this quarter, compared to 65,332 in Q1 2009.

Mobile broadband grew by 22,442 customers in Q2 2009, a 42.6% decrease on the number of mobile broadband additions since the last quarter. DSL added 8,292 subscriptions in Q2 2009, a decrease of 57.6%, in terms of additions, on Q1 2009. Since Q2 2007, net quarterly DSL additions have declined by 77.4%. As take up of broadband increases it is to be expected that net additions will continue to level off over time.

In contrast, net additions to cable continued to increase this quarter reaching 11,343. Cable net additions have grown by 26.9% this quarter. FWA subscriptions decreased by just over 3,500 subscriptions, while subscriptions in the "Other Broadband" category grew slightly this quarter.



Figure 3.3.3 – Quarterly Broadband Net Additions

Figure 3.3.4 shows the change between the number of fixed broadband subscriptions among 14 Western European countries between Q1'08 and Q1'09. Greece has shown the biggest increase in broadband subscriptions over the year, rising by almost 47% while Denmark had the lowest increase of 2.6%. Ireland experienced an increase of over 11% in fixed broadband subscriptions according to Informa data.



Figure 3.3.4 – Broadband Net Additions, Q1'08 – Q1'09

Figure 3.3.5 provides an estimate of the proportion of business and residential subscriptions to DSL, cable, fixed wireless, mobile broadband, fibre and satellite broadband services. At the end of June 2009, 80.3% of broadband subscriptions on all platforms were residential broadband subscriptions, compared to 79.2% in Q1 2009. The platform with the highest percentage of residential subscriptions is cable broadband, while satellite and fibre broadband lines (classified as "Other") have the highest percentage split of business customers, closely followed by FWA.



Figure 3.3.5 – Broadband Subscriptions by Subscription Type

Figure 3.3.6 illustrates the breakdown of broadband subscriptions by contracted speed across all broadband platforms. The chart shows that both residential and business users are more likely to subscribe to packages of between 2Mbps - 10Mbps. The trend of customers moving to higher speeds has continued in Q2 2009. 4.6% of residential users and 3.1% of business consumers have subscriptions in the >10Mbps range. The percentage of business consumers in each speed category has remained relatively unchanged since the last quarter. Many large firms access their broadband services over leased lines. Leased lines are not included in this chart. Leased line speeds can range to in excess of 1 gigabyte. Data on leased lines can be found in section 3.5 of this report.

Figure 3.3.6 – Broadband Subscriptions by Contracted Download Speeds



% of Subscriptions to Different Broadband Speed Offers
Figure 3.3.7 illustrates Eircom's market share of total broadband subscriptions when compared to other authorised operators' (OAO) share of overall broadband subscriptions, including DSL and alternative access technologies (which includes mobile broadband subscriptions). In this period, Eircom's market share was 36.5% for retail broadband subscriptions, compared to 37.1% in Q1 2009. The remaining 63.5% share of subscriptions was held by operators on alternative broadband platforms which include cable broadband, fixed wireless, fibre, satellite and mobile broadband subscriptions.



Figure 3.3.7 – Market Share of Total Broadband Market

Figure 3.3.8 provides the market share of fixed broadband operators by number of subscriptions. ADSL, cable modem, FWA, satellite and FTTX subscriptions are all included in the total broadband subscriptions figure which is used to calculate market shares.

Operators with a market share of 2% or more are shown in the chart below. All those operators with less than 2% of total fixed broadband subscriptions are then grouped together under OAOs. According to the data received from operators for Q2 2009, Eircom has 53% of total fixed broadband subscriptions, while UPC has 13% of subscriptions. BT has a 9% market share and Access, Perlico, Digiweb and Clearwire together make up 18% of the fixed broadband market. All other operators combined account for the remaining 7% of the fixed broadband market in terms of subscriptions.

Figure 3.3.8 – Subscription Market Share of Fixed Broadband Market



Fixed Broadband Market Share (Subscriptions), Q2 2009

Source: Quarterly Key Data Questionnaire

In presenting broadband penetration benchmarks for European countries, ComReg uses the OECD, the European Competitive Telecoms Association (ECTA) or European Commission data. ComReg will endeavour to publish this data on a quarterly basis as detailed in Figure 3.3.9. The data presented is based on the most recently published statistics at the time of publication.

Figure 3.3.9 – Broadband Data Sources

Source	Publish Date	Data Period as of	Included in ComReg Quarterly Report
OECD	October 2009	June 2009	Q3′09
ECTA	March 2010	December 2009	Q4′09
European Commission	March 2010	January 2010	Q1′10

Figure 3.3.10 provides a year on year cross country comparison of household broadband penetration rates based on data sourced from Informa UK Telecoms and Media. Based on the data used by Informa, Ireland's broadband household penetration for Q1 2009 is 56.8%, an increase of almost eighteen percentage points since Q1 2007. The Netherlands and Denmark continue to have the highest household broadband penetration with 83% and 81% respectively.



Figure 3.3.10 – European Broadband Household Penetration

Source: Informa WBIS 2009

Q1'09 Q1'08 Q1'07

The total number of broadband subscriptions in Ireland for Q2 2009 was 1,305,035. The broadband per capita penetration rate in Q2 2009 was 29.5% compared to 28.6% in the last quarter. When mobile broadband is excluded, the penetration rate is 21.1%. These figures are based on a population of 4,422,100 from Central Statistics Office (CSO) data.¹⁹

Figure 3.3.11 illustrates fixed broadband per capita penetration rates for EU countries as of January 2009. The EU's 14th Implementation Report has calculated Ireland's broadband penetration at 20.2% on the basis of a population size of 4.4 million. Ireland's penetration rate is below the EU27 average of 22.9% but Ireland has experienced the same growth rate as the EU27 average between January 2008 and January 2009 of 2.8 percentage points. Malta experienced the highest growth rate over the period (7%), which contrasts to others such as Finland which experienced no growth over the period. This is likely to be a reflection of the relative maturity of the broadband market in each country.



Figure 3.3.11 – European Broadband Population Penetration

Source: Informa WBIS 2009

Q1'09 Q1'08 Q1'07

¹⁹ http://www.cso.ie/releasespublications/documents/population/current/popmig.pdf

3.4 WiFi Broadband Access

ComReg provides data on the provision of public and private broadband services over WiFi as such access provides an alternative means of internet access for those users without internet access at home and/or a supplementary means of access for users who are away from their home or office. In addition new and more advanced devices such as the iPhone appear to be driving increased usage of WiFi hotspots. ComReg presents data on the WiFi market based on the number of WiFi hotspots and access points located nationally. Internet hotspots are typically public wireless access points where a computer, usually a laptop, or other portable device such as an iPhone can connect to the internet. A WiFi hotspot can be made up of one or more WiFi access points²⁰.

WiFi hotspots tend to be found in airports, hotel lobbies and cafés and restaurants. In most cases, the user pays for high-speed internet access at an access point, based either on a vouchered payment for a specific amount of time online or a recurring monthly subscription. There are a number of providers of these services in Ireland including Bitbuzz, Eircom and BT Ireland.

The number of WiFi access points increased by 2.9% between Q2 2008 and Q2 2009. The number of WiFi Hotspots has decreased by 2.4% since Q2 2008. In Q2 2009 there were approximately 18.85 million WiFi minutes of use in Ireland, a decrease of less than 1% from the previous quarter.

	Q2 2009	Q1'09-Q2'09	Q2'08-Q2'09
		Growth	Growth
WiFi Hotspots	1,200	-15.4%	-2.4%
WiFi Access Points	3,160	-6.5%	+2.9%
WiFi Minutes of Use	18,850,000	-0.4%	-

Figure 3.4.1 – WiFi Hotspots, Access Points and Minutes of Use

²⁰ Hotspots are typically public locations at which broadband internet access can be obtained. At these hotspots, users with a computer (usually a laptop) can wirelessly connect to the internet either for free or on payment of a fee. Typical locations for such hotspots include cafes and restaurants, hotels and airports. In general terms, more than one access point can be found at a hotspot.

3.5 Leased Line Data

A leased line is a private symmetric telecommunications line connecting two locations that is typically used by businesses who want a reliable dedicated network connection. Figure 3.5.1 shows the approximate number of retail leased lines in the Irish market as of June 2009. There were just over 14,200 leased lines in the market as of June 2009. As in other European countries, Ethernet in Ireland is likely to progressively replace leased lines given its added capabilities and cost. Ethernet connections will be included in the analysis in the future as take-up increases.

Figure 3.5.1 – Leased Lines, Q2 2009



3.6 ADSL Pricing Data²¹

In this report broadband tariff baskets have been supplied by Teligen using their T-Connect product. In order to ensure that services can be adequately compared, the benchmarking model prices a range of DSL and cable services based on defined usage of 30 hours per month, with each session assumed to last for 30 minutes.

While broadband is an always-on product, the assumption of an average user profile ensures that packages are comparable across countries. It further assumes a download usage of 5 Gigabytes every month for each service. Upload and download speeds (based on contracted speeds) are also analysed.

The data presented in the following charts illustrates the cheapest product available in each country from the incumbent operator under these usage assumptions for residential and business DSL and cable offerings. These packages are based on advertised download speeds. The charts below represent speed categories of 1 - 4 Mbps in the residential market and 4-10 Mbps in the business market. More specific details on the upload and download speeds for each of the analysed products are included in the chart.

The speed categories were chosen for incumbent operators across all benchmarked countries to ensure that a meaningful comparison can be made between packages in terms of contracted speeds offered. Incumbent operators' broadband packages are compared on the assumption that their products should be available nationally.

Further information on the composition of the broadband basket can be found in the Explanatory Memorandum which accompanies this report²².

²¹ This section does not include broadband tariff packages that are offered as special promotions. All tariffs are inclusive of VAT. VAT rates vary between Member States.

²² ComReg Document 09/71a

The lowest monthly residential DSL & cable baskets for the 1-4 Mbps speed category are charted in figure 3.5.1. Ireland ranks in 8th place among this group of 25 European countries. Ireland is nine places ahead of, and 32% cheaper than, the European average. The Irish broadband product benchmarked is UPC's Broadband Value package.



Figure 3.6.1 – Lowest Monthly Rental Residential DSL & Cable Basket (1 – 4 Mbps)

The lowest monthly residential DSL & cable baskets for all speeds are charted in figure 3.5.2. Ireland ranks in 14th place in this group of 27 European countries, four places ahead of the European average, and 20% cheaper than, the European average. The Irish broadband product benchmarked is the UPC Broadband Value package.



Figure 3.6.2 – Lowest Monthly Rental Residential DSL & Cable Basket (All Speeds)

The lowest monthly business DSL baskets are charted in figure 3.5.3. Ireland ranks in 9th place when the results for this group of 23 European countries are compared. Ireland is six places ahead of, and 35% cheaper than, the European average.





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4 Mobile Market Data

4.1 Number of Subscriptions and Penetration Rate

At the end of June 2009 there were 5,180,281 mobile subscriptions in Ireland. HSDPA mobile broadband subscriptions are included in this figure. If HSDPA subscriptions (370,424 this quarter compared to 347,982 in Q1 2009) are excluded, the total number of mobile subscriptions in Ireland was 4,809,857. Please note that subscriptions in Q2 2009 and previous quarters are not strictly comparable as the definition of mobile subscriptions has been amended for the period Q2 2009.²³ This accounts for the majority of the fall in mobile subscriptions this quarter. This overall fall in mobile subscriptions is primarily attributable to a fall in Vodafone's pre-paid mobile subscription base due to definitional changes this quarter. A historical plot is provided below in Figure 4.1.1.



Figure 4.1.1 – Mobile Subscriptions

²³ The term 'prepaid subscriber' refers to an active prepaid subscriber – i.e. those who subscribe to a prepaid tariff plan and/or have made an event that decrements their balance in the previous 90 days such as an outgoing call, SMS, MMS or mobile internet usage. Includes all 2G and 3G SIMs, including 3G SIMs used for mobile broadband. The term 'contract subscriber' refers to those customers with a current postpaid subscription. Includes all 2G and 3G SIMs, including 3G SIMs, including 3G SIMs, including 3G SIMs, including 3G SIMs used for mobile broadband.

Figure 4.1.2 illustrates the growth in mobile penetration since Q2 2005 and shows that at the end of June 2009, mobile penetration, based on a population of 4,422,100 (using a CSO April 2008 estimate), was 117.1%²⁴. Mobile penetration is recognised as the standard metric internationally to measure the adoption of mobile services, and is calculated based on the number of active SIM cards²⁵ per 100 of the population.

Given that some mobile users may have used more than one active SIM card during the period, there is likely to be some over-estimation of actual mobile usage using this metric. ComReg's calculation of mobile subscriptions includes active SIMs bundled with HSDPA datacards and USB modems for internet access via laptops/PCs as well as SIM cards used in mobile phones for voice and data services since Q2 2007.





Mobile Penetration Q2'05 - Q2'09

²⁵ Figures since Q2 2007 include HSDPA subscriptions in this chart.

Figure 4.1.3 illustrates the estimated national mobile penetration rates across sixteen European countries as of June 2009. Ireland (117.1%) is behind the EU average of 124.5%.²⁶ Greece, Portugal and Italy remain the three European countries with the highest mobile penetration while France, according to Yankee Group data, remains below the other countries benchmarked with a 90.2% penetration rate.²⁷ A number of countries have seen declines in penetration this quarter, possibly due to the downturn in international economies. Country population figures based on Eurostat data have also been updated and may also contribute to lower penetration rates this quarter.



Figure 4.1.3 – European Mobile Penetration Rates

²⁶ Irish data sourced from ComReg includes mobile broadband subscriptions. Not all countries in this chart may include mobile broadband subscriptions.

²⁷ The penetration rate for Greece may be inflated due to a high level of inactive pre-paid subscriptions reported in the market.

4.2 The Profile of Mobile Subscriptions in Ireland

Mobile users in Ireland pay for their mobile service by either purchasing pre-paid credit, or by receiving a monthly bill from their mobile operator, described in this report as a post-paid payment option. Figure 4.2.1 illustrates the mobile subscription base (including HSDPA) in Ireland classified by the proportion of pre-paid and post-paid subscriptions on both 2G and 3G networks at the end of June 2009²⁸.

Although the pre-paid and post-paid subscription split has seen little change since 2006, there has been a progressive shift towards post-paid subscriptions over the period driven by increases in mobile broadband subscriptions. At the end of June 2009 31.1% of subscriptions were post-paid compared to 25.6% in June 2007.





²⁸ Mobile broadband subscriptions (HSDPA) are included only from Q1 2008 in this chart.

Figure 4.2.2 shows the pre-paid post-paid split of mobile subscribers among the EU15 countries as of June 2009. According to this data, sourced from Informa, Ireland (70.1%) had the fourth highest number of pre-paid mobile customers among the EU15 countries in June 2009. Italy had the highest number of pre-paid subscriptions (84.4%) while Finland had the lowest proportion of pre-paid subscriptions (12.4%).



Figure 4.2.2 – International Proportion of Pre-Paid and Post-Paid Subscriptions

Figure 4.2.3 shows the pre-paid and post-paid subscription profile for each of the mobile operators in the Irish market (mobile broadband subscriptions are included). The majority of Vodafone's subscription base is pre-paid. As of Q2 2009, 67.8% of Vodafone's subscriptions are pre-paid. The majority of Q2 and Meteor's subscription bases are also pre-paid. Q2 has 61.4% pre-paid subscriptions, while Meteor has 87.3% pre-paid subscriptions.

3 Ireland's subscription base is more evenly split between post-paid and prepaid subscriptions than any of the other operators. 40.7% of its subscriptions are post-paid and the remaining 59.3% are pre-paid. Eircom Mobile, which is a business only service, has the highest proportion of post-paid customers with all of its subscriptions in the post-paid category. Tesco Mobile reports the largest proportion of pre-paid subscriptions, with its entire subscriptions base using the pre-paid payment option.



Figure 4.2.3 – Profile of Pre-Paid and Post-Paid Subscriptions – by Operator

Figure 4.2.4 shows the split between pre-paid and post-paid mobile broadband subscriptions as of Q2 2009. Vodafone, O2, Meteor and 3 Ireland all offer mobile broadband packages. 88.8% of all mobile broadband subscriptions are post-paid in Q2'09.

Figure 4.2.4 – Profile of Pre-Paid and Post-Paid Mobile Broadband Subscriptions



Figure 4.2.5 shows the 2G and 3G technology split of mobile subscriptions in the EU15 countries as of June 2009. According to Informa²⁹ Ireland (27%) had the seventh largest proportion of 3G mobile subscriptions technology among the EU15 countries. This is marginally behind the EU15 average of 27.6%. Spain (38%) had the highest proportion of 3G subscriptions while Belgium (6.6%) had the lowest proportion of 3G subscriptions.



Figure 4.2.5 –2G and 3G Mobile Subscriptions – by country

^{29 2}G refers to GSM technology and 3G refers to CDMA and W-CDMA technology.

4.3 Mobile Volumes

4.3.1 Total Voice, SMS and MMS Mobile Traffic³⁰

Figure 4.3.1.1 illustrates the growth in voice minutes, SMS, and MMS (Multimedia Messaging Service) messages sent over mobile networks since Q2 2007. Total retail mobile voice traffic totalled almost 2.54 billion minutes in Q2 2009, compared to almost 2.5 billion minutes in the previous quarter. This represents an increase of 1.5% in voice volumes since last quarter. This is a turnaround from Q1 2009 when volumes declined significantly in part due to a correction in the reporting of mobile voice minutes.³¹ In addition, research by Analysys Mason suggests that in Q1'09 mobile volumes declined across Europe due to the recession.³² Mobile originating minutes now account for 55% of all voice traffic in the Irish telecommunications markets.

The total number of SMS messages sent by mobile users in Ireland totalled just over 3 billion in Q2 2009 compared to over 2.9 billion in the previous quarter. SMS messaging grew by 3% this quarter and by 22.8% since Q2 2008. If the total volume of text messages is averaged over all active subscriptions, an average of 194 SMS messages were sent per subscription per month in Q2 2009, compared with 157 in the same period last year. The number of multimedia messages (MMS) sent in the quarter declined for the first time since Q4'06. There were just over 14.1 million MMS messages sent during the quarter. This is a decrease of 6.7% on the previous quarter but still represents an increase of 33% on the same period last year.





³⁰ SMS volumes include those sent over mobile broadband datacards and usb modems.

³¹ Prior to Q1 2009 mobile voice volumes included some mobile data minutes. As these are not based on voice calls they were removed from Q1'09 mobile voice volumes and had a downward impact on mobile voice volumes.

³² http://www.analysysmason.com/About-Us/News/Insight/Why-have-European-mobile-voice-volumes-fallen-for-the-first-time-ever/

4.4 Mobile Revenues

Figure 4.4.1 shows that mobile retail revenues for the quarter were over \notin 455 million, down from just over \notin 476 million, a drop of almost \notin 20.5 million since Q1 2009. This fall can be explained in part due to amendments in the mobile revenue definitions, in particular the definition of handset sales revenues, as well as the downturn in the global economy. The definition for handset sales revenues was changed in Q2'09 from a gross revenue to net revenue basis. Data revenues were just over \notin 110 million in Q2'09 with the remaining \notin 345 million comprised of voice and other revenues.³³



Figure 4.4.1 – Total Mobile Retail Revenues

³³ Please note that in Q2'09 the voice and other category revenues includes voice call revenues and net handset sales revenues, connection and rental charges, premium rate SMS and MMS revenues, roaming SMS, MMS, and data revenues. Handset sales revenues prior to Q2'09 were reported on a gross revenue basis.

Figure 4.4.2 outlines the percentage of mobile revenues attributable to all data revenues in the Irish market compared to sixteen other European countries. This benchmarking data is calculated independently by Yankee Group, and includes data revenues not only from SMS and MMS messaging, but also data revenues from GPRS data services and 3G data services.

Irish mobile operators rank seventh (last quarter Ireland was fifth) in comparison to other European operators in terms of levels of data revenues as a percentage of overall revenues. Although the proportion of data revenues did increase for Ireland, Denmark and Switzerland experienced a greater increase and moved above Ireland this quarter. In Q2 2009, 25.5% of total mobile revenues were contributed by data revenues in Ireland according to Yankee Group data.





Figure 4.4.3 compares ARPU (average revenue per user) across 16 European countries³⁴. Average revenue per user is an indication of average monthly revenue generated by mobile subscriptions in each country. While overall retail mobile revenues obtained from operators include handset sales revenues, the ARPU figures in this report do not incorporate handset sales revenues. Mobile ARPU in Ireland is estimated at €39.3 per month, which is the same as Norway. The EU average ARPU was €26.6 in Q2 2009.





³⁴ As far as possible, ARPU Figures are obtained directly from operators. Where unavailable, ARPU is calculated by dividing annual service revenues by the mid-term installed base (the sum of the opening and closing customer bases for the period divided by two). Once the Yankee Group has obtained or calculated all individual ARPU Figures, they are applied to each operator's mid-term user base to obtain service revenues by operator, which are then combined to obtain a country total. This total revenue figure is then divided by total mid-term users to derive country-level ARPU. Note that the graph includes all EU-15 countries except Luxembourg where no data was available.

Figure 4.4.4 shows European mobile revenues growth year on year to Q2'09. While a number of European countries, such as Denmark and France have experienced positive revenue growth over the year to Q2 2009 the vast majority of countries have experienced declines in their revenue growth. European average mobile revenue growth has fallen by 1.6% in the year to Q2'09. Ireland among others has shown a decline in revenue growth over the last year.



Figure 4.4.4 – European Mobile Service Revenue Growth

4.5 Average Minutes of Use

Mobile monthly ARPU is a function of both the price of mobile services and the level of usage of mobile services. The most frequently used metric to determine levels of mobile telephony usage is monthly minutes of use. ComReg has collected monthly minutes of use data from all operators in the Irish market since Q1 2007. Further information on the definition and calculation of average minutes of use by ComReg is detailed in the explanatory memorandum which accompanies this report.³⁵

The average minutes of use in Ireland for Q2 2009 was 232 minutes per month, a 2% increase on usage since the previous quarter. Minutes of use have increased this quarter in all countries with Portugal experiencing strongest growth of 2.1%.

Country	MoU Q2'09	MoU Q1'09	Quarterly Change Q2'09 – Q1'09
France	253	252	+.05%
Ireland	232	227	+2.0%
UK	170	169	+0.9%
Spain	157	156	+1.1%
Italy	136	135	+1.1%
Portugal	124	121	+2.1%
Germany	104	104	+0.5%

Figure 4.5.1 – Minutes of Use

³⁵ ComReg Document 09/71a

Figure 4.5.2 plots the annual percentage change in Average Revenue per User (ARPU) against Minutes of Use (MOU) for the seven countries listed in figure $4.5.1^{36}$.

While Portugal and Italy have experienced an increase in MOU between Q2'08 and Q2'09 all countries have experienced a decline in ARPU, suggesting that operators are offering lower or discounted tariffs to customers. In Ireland both ARPU and MOU have decreased by around 4%.





³⁶ Data was only available for Ireland, France, Spain, UK, Germany, Italy, and Portugal.

4.6 Competition in the Mobile Market

4.6.1 Mobile Market Shares- By Subscription and Retail Revenues

Figures 4.6.1.1 and 4.6.1.2 outline mobile market share based on the number of active subscriptions reported by each operator. The former includes mobile broadband since Q3 2007 while the latter excludes mobile broadband. It should be noted that while 3 Ireland's market share is presented as a percentage of all market subscriptions in Ireland, 3 Ireland operates only in the 3G sector. Tesco and Eircom Mobile are not included in figures 4.6.1.1 and 4.6.1.2.

Vodafone's market share, (39.1% if HSDPA is included and 39.9% if HSDPA is excluded), has declined quarter on quarter over the last two years including and excluding mobile broadband. However changes to the definitions of mobile subscriptions this quarter account for a large part of Vodafone's loss in market share. O2's market share (33.3% if HSDPA is included and 33.7% if HSDPA is excluded), has experienced an increase this quarter in subscriptions including HSDPA and excluding HSDPA.

Meteor accounts for 19.7% of the total active mobile subscription base in Ireland (including mobile broadband) and 21.1% excluding mobile broadband. 3 Ireland has a market share of 7.8% (including mobile broadband) and 5.3% excluding mobile broadband. Excluding O2 and Vodafone, Meteor and 3 Ireland now account for 27.6% of the market including mobile broadband and 26.4% excluding mobile broadband.



Figure 4.6.1.1 – Market Share – Number of Subscriptions (inc. HSDPA) Market Share by Subscription (inc. HSDPA) Q2'07 - Q2'09

Source: Quarterly Key Data Questionnaire



Figure 4.6.1.2 – Market Share – Number of Subscriptions (ex. HSDPA)

Figure 4.6.1.3 shows the subscription market share of the two mobile network operators who have the largest percentage market share as of June 2009. Market concentration is lowest in the UK where the largest two operators have 50.6% of the market while in France the largest two operators have 83.1%. According to Informa data Ireland's largest two operators have 72.6% of the market which has declined from 75.9% in the year to June 2009. Ireland has the sixth least concentrated mobile market among the EU15 countries on this basis.



Figure 4.6.1.3 – European Mobile Operators' Market Share of Subscriptions

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Figure 4.6.1.4 provides an analysis of market shares by revenue for mobile operators in the Irish market. Tesco and Eircom mobile are not included in this chart. Q1 2009 market shares have been revised in this report to include handset sales revenues as these were omitted in the quarterly report 09/50.³⁷ Vodafone's market share remained unchanged this quarter at 42.6% while O2's market share declined by 1.5 percentage points to 35.4%. In contrast, Meteor's market share increased to 18.2% while 3 Ireland's market share grew to 3.8%.



Figure 4.6.1.4 – Revenue Market Share

 $[\]ensuremath{\mathsf{37}}$ Please note that as of Q2'09 handset sales revenues are reported on a net not a gross revenue basis.

4.6.2 Switching in the Mobile Market

Figure 4.6.2.1 illustrates the cumulative total of mobile numbers ported between Irish mobile operators since the launch of Mobile Number Portability (MNP) in June 2003. MNP allows mobile subscriptions to switch mobile operator while retaining their mobile number.

Just over 1,659,000 subscriptions have used MNP to switch operator since June 2003, an increase of 5.4% since Q1 2009 and an increase of 27.9% since the same quarter last year. In the quarter to June 2009 almost 86,000 numbers were ported to another operator (just over 362,000 numbers in the year to March 2009). In the year to June 2009 an average of 90,604 numbers has been ported each quarter.



Figure 4.6.2.1 – Cumulative Mobile Numbers Ported

Source: Quarterly Key Data Questionnaire

4.7 Mobile Pricing Data³⁸

The Teligen mobile baskets presented in this Quarterly Report are based on an OECDapproved methodology using assumptions around specific usage levels for low, medium and high contract and pre-paid subscription packages. They are calculated and analysed independently by Teligen, using an OECD methodology which includes PPPs (Purchasing Power Parities) to reflect the real cost of mobile services compared to all other costs within a country. While all mobile post-paid tariff baskets presented in the Teligen baskets are currently based on typical 2G services as approved by the OECD, ComReg recognises that there may be other more competitive packages available with 3G handsets.

4.7.1 Low User Post Paid Mobile Basket³⁹

Ireland maintains its ranking of eight out of the 19 European countries benchmarked for the low user post-paid basket since last quarter. Ireland also remains one place better than the European average for this basket.



Figure 4.7.1.1 - OECD Low User Post Paid Mobile Basket

39 All tariffs are inclusive of VAT, rates will vary between Member States

³⁸ The 'Fixed' component of price refers to the standard charges imposed by operators, regardless of the amount of calls made (i.e. connection and rental). Teligen's calculation of this Figure is made up of: Installation Charge/5 + Rental charge for 1 year. The 'Voice' component of price refers to the charges imposed by operators, arising from the number of voice calls made by the user, while "Message" refers to the charges imposed by operators, arising from the number of SMS and MMS messages sent by the user.

4.7.2 Medium User Post Paid Mobile Basket

Compared to last quarter Ireland again ranks in tenth place in the medium user post paid mobile basket. Ireland ranks two places behind the European average.



Figure 4.7.2.1 - OECD Medium User Post Paid Mobile Basket

4.7.3 High User Post Paid Mobile Basket

In the High-User Post-Paid basket, Ireland ranks tenth among the 19 European countries, unchanged since the last quarter. Ireland is two places behind the European average. Finland and Denmark continue to be the cheapest countries for this basket since February 2009.





4.7.4 Pre-Paid Mobile Basket⁴⁰

For the pre-paid mobile basket, Ireland remains tenth in the rankings this quarter. Among the 19 European countries charted, Denmark, Finland and Sweden remain the three countries with the cheapest pre-paid basket. The cost of this basket in Ireland remains slightly cheaper than the EU average.





⁴⁰ The OECD has found that there is little difference between the average pre-paid usage and low-user post-paid usage. Thus, the pre-paid and low user post paid baskets are based on the same usage assumptions.

4.8 Mobile Operators' Capital Expenditure

Capex as a percentage of sales is a financial measurement of efficiency which indicates the level of capital expenditure incurred to sustain a particular level of sales.⁴¹ Figure 4.8.1 charts this ratio for 15 European countries as well as the European average for Q2'09. Mobile Capex to sales for Ireland was the fifth lowest among the 15 European countries in Q2 2009.



Figure 4.8.1 – European Mobile Capex to Sales

⁴¹ In terms of efficiency, company X would be more efficient than company Y if it has a higher CapEx/Sales ratio.

5 Broadcasting

5.1 Overall Broadcasting Market

The broadcasting analysis provided in this report uses operator data in conjunction with CSO estimates⁴² of the total number of TV households in Ireland. This is particularly relevant in deriving the number of households that use only a Free-to-Air⁴³ television service. Of the total number of TV households at the end of June 2009 there were 504,680 subscriptions to cable⁴⁴/MMDS⁴⁵ television services in Ireland down 1.6% from the previous quarter. For the same period, ComReg estimates that BSkyB had 586,431 Irish satellite⁴⁶ TV subscriptions, a growth of 7,701 subscriptions on the previous quarter and 29,431 since the same reporting period last year. The total number of pay TV households in Ireland (cable, MMDS and satellite) is 1.091 million.⁴⁷ Pay-TV households represent 75% of all homes with a television.

Platform	No of Subscriptions Q2'09	Quarterly Change Q1 '09 – Q2'09	Annual Change Q2'08 – Q2'09
Analogue Cable	181,460	-8.1%	-22.1%
Digital Cable	241,385	+4.9%	+11.7%
MMDS	81,835	-4.1%	-15.0%
Satellite	586,431	+1.3%	+5.3%
Total-Pay-TV H'holds	1,091,111	-0.03%	-1.0%
Free-to-View	369,025	+0.59%	+3.7%
Total TV H'holds	1,460,136		

Figure 5.1.1 – Broadcasting Subscriptions and Growth Rates by Platform

⁴² ComReg uses the most up to date figure for TV households as per CSO figures when calculating penetration of Pay TV services. The latest CSO data published in the 2008 Information Society and Telecommunications Report, reported 1.466 million households while the 2004/5 household budget survey indicated that 99.6% households in Ireland had access to a TV. As the household budget survey is undertaken every 5 years, this figure will remain fixed and will be updated once results from the next household budget survey are published.

⁴³ Free-to-Air television broadcasts are sent unencrypted and may be received via any suitable receiver. Although these channels are described as 'free', the viewer does pay for them by payment of a licence fee.

⁴⁴ Cable television is a system of providing television to consumers via radio frequency signals transmitted to televisions through fixed optical fibres or coaxial cables as opposed to the over-the-air method used in traditional television broadcasting (via radio waves) in which a television antenna is required.

⁴⁵ MMDS (Multichannel Multipoint Distribution Service) is a wireless telecommunications technology, used as an alternative method of cable television programming reception. MMDS is usually used in sparsely populated rural areas, where laying cables is not economically viable. 46 Satellite television is television delivered by way of communications satellites, as compared to conventional terrestrial television and cable television. As of Q3 2008, BSkyB Irish Subscription data is based on ComReg estimation of BSkyB group data.

⁴⁷ TV can also be delivered through other mechanisms such as over the internet (IPTV). While this data is not presented in this quarter, ComReg hopes to include such information in the future.

Figure 5.1.2 profiles TV households in Ireland based on those households who subscribe to an analogue or digital cable television service, MMDS, a digital satellite service, or a freeto-air television service. Between Q2 2007 and Q2 2009 the market share of satellite subscriptions has increased by 6.1 percentage points. Over the same period, the market shares of both MMDS and analogue cable have decreased by 1.9 percentage points and 4.6 percentage points respectively.



Figure 5.1.2 - Broadcasting Market Breakdown

5.2 Digital and Pay TV

Figure 5.2.1, below, profiles the pay-TV market in Ireland, comparing those who subscribe to an analogue service provided by cable operators, and those who pay for digital TV, provided via either a digital cable service (inc. MMDS) or satellite service with the number of free to view TV viewers in Ireland. In Q2 2009 74.7% of all TV homes in Ireland subscribed to a paid television service. This has increased by approximately 1.7 percentage points over the last two years. However, over the last few quarters the market share of paid television service in Ireland has remained relatively constant around the 75% level.

Of those subscribing to a paid television service, 53.7% had a satellite subscription while 83.1% (906,696) of paid television subscriptions in Q2 2009 were digital. This represents an increase of 5.2% since Q2 2008 and an increase of 1.8% since Q1 2009. 62.1% of all TV households in Ireland now receive their TV service via a digital television signal, based on either digital cable, digital MMDS or satellite.



Figure 5.2.1 - Pay TV Market

Figure 5.2.2 profiles the digital TV market, examining the proportion of digital subscriptions who receive their TV signal via a satellite subscription compared with those using digital cable (inc. MMDS). The proportion of digital cable/MMDS subscriptions has decreased by 2.3 percentage points over the last two years at the expense of satellite TV.



Figure 5.2.2 - Digital TV

Digital TV (Cable and Satellite Breakdown) Q2'07 - Q2'09

5.3 International Television Data

Figure 5.3.1 shows cable TV subscriptions as a percentage of all households. This data which is sourced from Informa, indicates that across 13 European countries Denmark experienced the largest household cable TV penetration rate increase while the Netherlands experienced the largest decline in household cable TV penetration rates between Q1 2007 and Q1 2009. In Q1 2009 Ireland's household cable TV penetration rate (34%) was above the average of the EU countries benchmarked (31%).



Figure 5.3.1 – Cable TV Household Penetration Q1'07-Q1'09
6 Emerging Trends – Mobile Payments

6.1 Overview – Mobile Payments

As mobile phone ownership becomes increasingly widespread⁴⁸, the opportunities to expand mobile functionality such as mobile payments (mpayments) are increasing. It is estimated that while there are four billion phones in use worldwide there are only 1.6 billion bank accounts showing the potential for this market.⁴⁹ While the technology for mobile payments has been around for approximately 10 years there have been relatively few widespread commercial applications of the technology to date. In Europe and North America with a few exceptions (such as Austria), the development of mobile payments has not been successful. However, mobile payment services in Asia have been more successful especially in South Korea and Japan who are regarded as leaders in adoption of mpayments.

Recently mpayments have been gaining more attention with specialised mobile money offerings emerging in the market such as Monilink and Nokia Money.⁵⁰ However, there is still a long way to go, with many challenges to overcome, both on the demand and supply side, before the global market gains significant size. In Ireland, evidence from a recent ComReg residential survey indicates that there is relatively low awareness of mobile payments among mobile phone users, with only 16% saying they are aware that they can make an mpayment. In addition, of those aware of mpayments, only 14% claim to have made an mpayment in the last 12 months.⁵¹

6.2 Mobile Payments Definition

While the various types of financial services transacted through mobile phones can be defined based on their characteristics, a mobile payment can loosely be defined as any transaction where a mobile phone is used to initiate, authorize and/or complete payment for goods/services and/or transfer of money between accounts.

6.3 Types of mobile money services

Informa Telecoms and Media define the mobile payments market based on the scale of payment and place of purchase.

- Remote mpayments where the subscriber is not present at the point of purchase.
- Local or proximity mpayments where the subscriber is physically present or near the point of sale. The majority of these applications are likely to employ contactless

⁴⁸ According to Informa's WCIS database over 60% of the world's population has a mobile phone.

⁴⁹ https://communicationsdirectnews.com/do.php/130/36874?12612

⁵⁰ For more detail on Monilink see section 6.6 Case studies and examples. Nokia has recently announced that it will launch a mobile based financial service called Nokia Money (http://www.reghardware.co.uk/2009/08/26/nokia_money/).

Near Field Communications (NFC) technologies (card embedded in an NFC enabled phone; touch and pay in point of sale (pos) and vending machines).

- Mbanking services where messaging services provide notifications and information regarding the subscriber's account such as credit transfers between accounts, paying bills and selling/buying stock.
- mMoney transfer service where the movement of money or value from person to person is via the mobile phone.

Different transactions lead to different business models, different platforms and solutions. Informa distinguish between the various models, though some of these more complex models (MNO and Bank centric), are less likely to gain adoption given the cost and complexity involved.

- MNO-centric refers to a situation where the MNO either acquires a banking licence or operates services in such a way as to avoid the need for a licence and the mobile operator performs all banking functions.
- An MNO-led partnership is a partnership with banks or other financial institutions where operators provide the channel to the market and brand, customer service and maybe transaction processing. The bank provides the banking licence and its financial experience.
- Third party-led refers to mpayments or mbanking business led by an independent third party payments service provider.
- A bank-led partnership arises when a traditional bank uses the mobile phone as an extension of its conventional branch based banking services.
- Finally, a bank-centric model is one where the bank takes on the role of the mobile operator and becomes an MVNO buying wholesale access to a mobile operator's network and retailing the mobile service under its own brand.⁵²



Figure 6.1 – mPayments Business Models

51 ComReg, Millward Brown Lansdowne, Consumer ICT Survey, Q2 2009.

⁵² Mobile banking and payments report. Informa UK Limited 2009. All rights reserved.

6.4 Key market players

Mobile money transactions involve a multitude of stakeholders where each player has different incentives and strategies. Sometimes these incentives and strategies may diverge.

Consumers expect a personalized and easy to use service, where privacy, security, interoperability and anonymity are guaranteed. Merchants expect faster transaction times, low cost in using the system, integration with existing payment systems, and security. For banks the expectations are that development of new payment applications will lead to higher volumes in banking and increased customer loyalty. Telecom network providers want to drive new incomes through increases in traffic and reduced churn. Mobile device manufacturers want to increase ARPU and attain large-scale market adoption with an embedded mobile payment application. Meanwhile, Governments may view these transactions as a way to increase revenue through taxation of mpayments.⁵³

Additionally some global players are likely to develop initiatives around mpayments. These players include Apple, Google, Yahoo and eBay. Ovum sees independent players having an increasingly important role in enabling mobile payments. There is an opportunity for independent players to operate a platform connected to several banks on one side and several mobile operators on the other.⁵⁴

6.5 Opportunities and challenges

Mobile payments offer potential benefits of greater convenience, more expedient transactions and lower costs. Therefore, mobile payments can become a viable complement or replacement to cash, cheques and credit/debit cards.

However, in order for mobile payment transactions to become widely acceptable, certain conditions need to be met. Simplicity and usability, universality (global coverage), interoperability (standards and open technology), security, privacy and trust, cost (no costlier than existing methods), and speed are expected by consumers. For businesses customers, authentication and non-repudiation (users cannot deny the message they sent) are important.⁵⁵

A regulatory framework and widely accepted standards are critical for mobile payment applications. Mpayments currently lack cohesive technology standards that can provide a universal mode of payment. Consolidation of standards is critical to success for the

⁵³ Mobile payment systems and services: an introduction, Mahil Carr, IDRBT Hyderarbad.

⁵⁴ Mobile payments: progressing towards large scale deployments, Ovum, 2008.

⁵⁵ Mobile payment systems and services: an introduction, Mahil Carr, IDRBT Hyderarbad.

mpayments market. The lack of standards leads to local and fragmented versions of mpayments.

Regulation will play a particular role in shaping the service in markets. Although mpayments may allow parties to make economic exchanges, they are not legal tender in the sense they lack the status of other payment instruments such as cash, which is authorised, adopted and guaranteed by the government. Legislation has to be put in place that will make mpayments legal tender. The regulations for players in the financial industry are different from those governing the telecommunications industry, which means that each industry has its own particular standards body to comply with.⁵⁶

Concerns about security are a key reason why mpayments have not been widely adopted in developed markets. According to a Unisys Security Index global mobile payments report⁵⁷ people remain apprehensive about the security of using mobile phones to pay for bills or to do their banking or shopping online.

Another big challenge is the development of infrastructure for the payments and the availability of appropriate handsets. Industry consensus is that there will not be a substantial number of NFC phones in the market until 2010-2011.

As of 2004/5 approximately 23% of Irish households did not have a bank account. These households tend to be comprised of people with low incomes, in younger and older age categories, migrants or from ethnic minorities. For these individuals in particular a well developed mpayment system could help to serve their needs and promote their social inclusion.⁵⁸

However, this transition faces a strong challenge in Ireland. The Irish Payments Services Organisation (IPSO) believes there needs to be a cultural shift to get Ireland moving away from its dependence on paper transactions. Ireland's use of cash has been growing at 13 times the total EU rate of growth according to IPSO. Recent figures show that people withdrew almost ϵ 6,500 per capita from ATMs in Ireland which is more than twice the EU average in 2007.⁵⁹

6.6 Case studies and examples

A good example of a commercial service in the mobile money market is Monitise which is a UK-based mobile banking service. Monitise services are live in the US and UK. In the UK a joint venture with Vocalink was established which operates the UK's ATM switch network.

⁵⁶ Mobile payment systems and services: an introduction, Mahil Carr, IDRBT Hyderarbad.

⁵⁷ http://www.unisyssecurityindex.com/resources/reports/mobile-security-report.pdf

⁵⁸ Understanding financial inclusion, IPSO national payments conference presentation, PFRC, 2008.

The mobile banking service uses the ATM infrastructure to access bank accounts. Customers download the mobile banking application to their device which allows them to view bank account information and fund transfers. Recently Monitise secured a \$13m deal with Visa for its mobile payment services. The five year deal includes Visa taking a 14.4% stake in Monitise and will make the company's mbanking services available to Visa's 1.7 billion users in 2010.⁶⁰

In an Irish context Anam mobile and Macalla are examples of players operating in the mobile money transfer space. Macalla has customers such as Vodafone, mPay and Bank of Ireland. Macalla offer a suite of services beyond money transfer such as mobile banking and top up services.⁶¹

6.7 Forecasts

Mpayments may follow the path of internet banking where consumers were wary at first but then become more comfortable with online banking. There are still many consumers that do not use online banking and likewise mpayments will not completely replace existing payment methods. The technology is already well developed but consumer up take is slow. Some segments like the remittance market are likely to adopt such technology quicker than most.⁶²

Informa estimates that gross transaction values of mpayments and mbanking will grow from \$71 billion in 2008 to \$862 billion in 2013. In terms of user growth, estimates by Informa are presented below in figure 6.2.



Figure 6.2 – Global mPayments and mBanking users, 2008 - 2013

Source: Informa Telecoms & Media

⁵⁹ Annual review, IPSO, 2008.

⁶⁰ Mobile payments: progressing towards large scale deployments, Ovum, 2008.

⁶¹ Yankeegroup

⁶² The double edged sword of mpayments, Lafferty Cards Insider, Issue 2008/9.

7 Appendix

Aggregated SB-WLR Performance Statistics, as supplied by Eircom, are published in accordance with ComReg Decision Notice (07/61) Section 6.6 (vii).

Performance metrics: Q2 2009

Apr-09		
Order Type	% Orders Validated within Performance Target	% Orders Delivered within Performance Target
DR	-	99.90%
LE	-	100.00%
PW	-	98.65%
LNI/LTI/MI	-	99.78%
LNI/LTI/MI	-	99.78%
CL	-	99.75%
LNN/LTN/MN	99.78%	86.27%
CH	-	99.65%
CN	-	100.00%
CM	-	100.00%

May-09

Order Type	% Orders Validated within Performance Target	% Orders Delivered within Performance Target
DR	-	99.59%
LE	-	100.00%
PW	-	98.92%
LNI/LTI/MI	-	100.00%
LNI/LTI/MI	-	100.00%
CL	-	99.21%
LNN/LTN/MN	99.54%	82.69%
СН	-	99.75%
CN	-	100.00%
CM	-	99.88%

Jun-09

Order Type	% Orders Validated within Performance Target	% Orders Delivered within Performance Target
DR	-	99.33%
LE	-	99.29%
PW	-	98.00%
LNI/LTI/MI	-	97.93%
LNI/LTI/MI	-	99.79%
CL	-	99.00%
LNN/LTN/MN	99.07%	92.52%
CH	-	99.01%
CN	-	100.00%
CM	-	99.90%

Count of Time Interval	SLA Type	SB-WLR Repair performance metric Qrt 2009	2 Apr - Jun
QRT 2 2009	Percentage of faults		
	<=2	<=5	<=10
Grand Total	69.43%	91.37%	97.31%

Glossary

DR	Data request: supply of list of numbers, DDIs/MSNs and Ancillary Service
DIX	for a customer account
PW	Provide Wholesale Line Rental (WLR) and Carrier Selection (CS)
СН	Modify or provide Ancillary Services
CL	Cease Line
1 71	Provide WLR and Carrier Pre-Selection (CPS) and additional line to a
LIN	specified Customer Account (Non-Insitu)
I NU	Provide WLR and Carrier Pre-Selection (CPS) and new line to a new
	Customer Account (In-Situ)
	Provide WLR and Carrier Pre-Selection (CPS) and additional line to a
L 11	specified Customer Account (In-Situ)
	Provide WLR and CPS and new line to a new Customer Account (Not In-
LNN	Situ)